

WHAT IS CLAIMED IS:

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1. A heat sink for a semiconductor device,
comprising:

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a base having a first surface on which a plurality of
heat-radiating fins are arranged, and a second surface which
contacts the semiconductor device directly; and

a heat spreader provided on the second surface of the
base so that the heat spreader does not contact the
semiconductor device directly.

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2. The heat sink according to claim 1 wherein the
heat spreader comprises an opening which covers at least a
periphery of the semiconductor device bonded directly to the
second surface of the base.

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3. The heat sink according to claim 1 wherein the
heat spreader comprises a plurality of heat spreader pieces
arranged on the second surface of the base to encircle a
periphery of the semiconductor device, the heat spreader pieces
being embedded in the base so that the heat spreader pieces are
flush with a back surface of the base.

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4. The heat sink according to claim 1 wherein the
heat spreader comprises a pair of heat spreader pieces each of

which is embedded in the base to oppose one of side surfaces of the semiconductor device, each heat spreader piece having a depth that is almost the same as a depth of the base and having tapered portions along side surfaces of the heat spreader piece.

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5. A semiconductor device comprising a heat sink,
the heat sink comprising:

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a base having a first surface on which a plurality of heat-radiating fins are arranged, and a second surface which contacts the semiconductor device directly; and

a heat spreader provided on the second surface of the base so that the heat spreader does not contact the semiconductor device directly.

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6. The semiconductor device according to claim 5 wherein the heat spreader comprises an opening which covers at least a periphery of the semiconductor device bonded directly to the second surface of the base.

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7. The semiconductor device according to claim 5 wherein the heat spreader comprises a plurality of heat spreader pieces arranged on the second surface of the base to encircle a periphery of the semiconductor device, the heat spreader pieces being embedded in the base so that the heat spreader pieces are flush with a back surface of the base.

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8. The semiconductor device according to claim 5
wherein the heat spreader comprises a pair of heat spreader
pieces each of which is embedded in the base to oppose one of
side surfaces of the semiconductor device, each heat spreader
5 piece having a depth that is almost the same as a depth of the
base and having tapered portions along side surfaces of the heat
spreader piece.

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